

Shapiro-Wilk Test of Normality
Barium Detected in Glen Rose Formation Limestone
Camp Stanley Storage Activity, Texas

Number of Samples, n	Reverse					ln of Reverse				
	Ordered Concentrations x(i)	Ordered Concentration x(n-i+1)	Difference x(n-i+1)-x(i)	a(n-i+1) ^a	b(i) ^b	ln of Ordered Concentrations ln x(i)	ln of Reverse Ordered Concentrations ln x(n-i+1)	Difference ln x(n-i+1)- ln x(i)	a(n-i+1) ^a	b(i) ^b
1	3.5	7.8	4.3	0.5739	2.47	1.25	2.05	0.80	0.5739	0.46
2	3.8	6.9	3.1	0.3291	1.02	1.34	1.93	0.60	0.3291	0.20
3	4.1	6.6	2.5	0.2141	0.54	1.41	1.89	0.48	0.2141	0.10
4	4.5	6.4	1.9	0.1224	0.23	1.50	1.86	0.35	0.1224	0.04
5	5.3	5.5	0.2	0.0399	0.01	1.67	1.70	0.04	0.0399	0.00
6	5.5	5.3	-0.2		b= 4.26	1.70	1.67	-0.04		b= 0.80
7	6.4	4.5	-1.9		S= 1.38	1.86	1.50	-0.35		S= 0.261
8	6.6	4.1	-2.5		W ^c = 0.951	1.89	1.41	-0.48		W ^c = 0.949
9	6.9	3.8	-3.1		W(0.05,10)= 0.842	1.93	1.34	-0.60		W(0.05,10)= 0.842
10	7.8	3.5	-4.3		Normality= Normal	2.05	1.25	-0.80		Normality= Lognormal

*** Distribution is normal because of higher W value.

^a From An Analysis of Variance Test for Normality (complete samples), by S.S. Shapiro and M.B. Wilk, Biometrika, vol. 52, pp. 591-611.

^b $b(i) = [x(n-i+1) - x(i)] * a(n-i+1)$

^c $W = b*b/S*S*n$